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Hyun-gyoo Yook

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SUGHRUE MION, PLLC

2100 PENNSYLVANIA AVENUE, N.W.

SUITE 800

WASHINGTON, DC 20037

EXAMINER

TRAN, PHILIP B

ART UNIT

PAPER NUMBER

2455

NOTIFICATION DATE

DELIVERY MODE

03/23/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

sughrue@sughrue.com

PPROCESSING@SUGHRUE.COM

USPTO@SUGHRUE.COM

Office Action Summary	Application No. 10/823,646	Applicant(s) YOOK ET AL.	
	Examiner Philip B. Tran	Art Unit 2455	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

Notice to Applicant

1. This communication is in response to Amendment filed 17 December 2009.
Claims 2-3 and 28-29 have been amended. Claims 31-36 have been newly added.
Therefore, claims 1-36 are pending for examination.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-36 are rejected under 35 U.S.C. 102(e) as being anticipated by Noguchi et al (Hereafter, Noguchi), U.S. Pat. No. 7,076,550.

Regarding claim 1, Noguchi teaches a cooperative work service management apparatus comprising a negotiator module for determining cooperative work service roles of devices connected to a network, through a predetermined election algorithm, so that a cooperative work service can be performed among the devices by using descriptions collected from the devices, and controlling operations of the devices according to the determined cooperative work service roles to process a control command transmitted from a control device connected to the network (i.e., interpretation unit for recognizing that new apparatus has been connected to the network of

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cooperative work service and interpreting the functional information of the new apparatus) [see Abstract and Col. 2, Lines 34-47 and Col. 3, Lines 25-56].

Regarding claim 2, Noguchi teaches a cooperative work service management apparatus, comprising: a coordinator module for one of directly performing a control command transmitted from a control device present in a network having devices connected thereto and transmitting the control command to other devices so as to control operations of the other devices performing at least one same function where the at least one same function is required for cooperative work service (i.e., input/output function or storing function) [see Fig. 8], according to descriptions collected from the devices connected to the network and cooperative work service roles determined through a predetermined algorithm (i.e., interface unit for notifying the other network connection apparatus connected to the network of the information of its own apparatus stored in the information storing unit and controlling the input/output relationship regarding the cooperative service that can be realized in combination with the functions of a plurality of apparatus according to definition/service-related description) [see Col. 2, Lines 44-47 and Col. 11, Line 51 to Col. 12, Line 21].

Regarding claim 3, Noguchi teaches a cooperative work service management apparatus, comprising: a supporter module for receiving a control command of a control device, transmitted from a coordinator module present in a network to provide a service corresponding to the control command, according to descriptions collected from devices

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connected to the network and cooperative work service roles determined through a predetermined algorithm (i.e., function storage unit for storing the service definition information defining the service by the input/output relationship and service-related description relating to cooperative service that can be provided in cooperation with the other apparatus connected in the network) [see Col. 4, Lines 8-29 and Col. 9, Lines 38-50], wherein the devices perform at least one same function where the at least one same function is required for the service and wherein the predetermined algorithm allocates the service with the at least one same function amongst the devices to perform the at least one same function (i.e., input/output function or storing function) [see Fig. 8].

Regarding claim 4, Noguchi teaches a cooperative work service management apparatus, comprising:

a negotiator module for determining cooperative work service roles of devices connected to a network through a predetermined election algorithm so that a cooperative work service can be performed among the devices by using descriptions collected from the devices (i.e., interpretation unit for recognizing that new apparatus has been connected to the network of cooperative work service and interpreting the functional information of the new apparatus) [see Abstract and Col. 2, Lines 34-47 and Col. 3, Lines 25-56]; and

a coordinator module for one of directly performing a control command transmitted from a control device present in the network and transmitting the control

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command to other devices, so as to control the operations of the devices (i.e., interface unit for notifying the other network connection apparatus connected to the network of the information of its own apparatus stored in the information storing unit and controlling the input/output relationship regarding the cooperative service that can be realized in combination with the functions of a plurality of apparatus according to definition/service-related description) [see Col. 2, Lines 44-47 and Col. 11, Line 51 to Col. 12, Line 21].

Regarding claim 5, Noguchi further teaches the cooperative work service management apparatus as claimed in claim 4, further comprising a supporter module for receiving the control command transmitted from the coordinator module to provide a service corresponding to the control command (i.e., function storage unit for storing the service definition information defining the service by the input/output relationship and service-related description relating to cooperative service that can be provided in cooperation with the other apparatus connected in the network) [see Col. 4, Lines 8-29 and Col. 9, Lines 38-50].

Regarding claim 6, Noguchi further teaches the cooperative work service management apparatus as claimed in claim 4, wherein if the cooperative work service roles are determined through the election algorithm, the negotiator module sets the determined cooperative work service roles into a description of a relevant device so that the cooperative work service can be performed among the devices [see Col. 11, Line 51 to Col. 12, Line 21].

Regarding claim 7, Noguchi further teaches the cooperative work service management apparatus as claimed in claim 4, wherein the election algorithm is written in a predetermined programming language, which serves to coordinate the cooperative work service roles of the devices so that consistency in the same services can be maintained according to a function of service to be provided through the cooperative work service by using the descriptions provided from the devices present in the network [see Figs. 3-5 & 14-15].

Claim 8 is rejected under the same rationale set forth above to claim 4.

Claim 9 is rejected under the same rationale set forth above to claim 5.

Claim 10 is rejected under the same rationale set forth above to claim 6.

Claim 11 is rejected under the same rationale set forth above to claim 7.

Regarding claim 12, Noguchi teaches a home network system for cooperative work service, comprising:

a plurality of devices connected to a network [see Fig. 8];

a negotiator module connected to the plurality of devices, for determining cooperative work service roles of the plurality of devices by applying device descriptions collected from the plurality of devices to a predetermined election algorithm so that the cooperative work service can be performed in consideration of a function of a corresponding device (i.e., interpretation unit for recognizing that new apparatus has

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been connected to the network of cooperative work service and interpreting the functional information of the new apparatus) [see Abstract and Col. 2, Lines 34-47 and Col. 3, Lines 25-56]; and

a coordinator module for directly performing a control command transmitted from a control device according to the cooperative work service roles determined by the negotiator module (i.e., interface unit for notifying the other network connection apparatus connected to the network of the information of its own apparatus stored in the information storing unit and controlling the input/output relationship regarding the cooperative service that can be realized in combination with the functions of a plurality of apparatus according to definition/service-related description) [see Col. 2, Lines 44-47 and Col. 11, Line 51 to Col. 12, Line 21].

Claim 13 is rejected under the same rationale set forth above to claim 5.

Regarding claim 14, Noguchi further teaches the home network system as claimed in claim 12, further comprising a supporter module, wherein the supporter module is provided in a device, to which the supporter module belongs, among the plurality of devices connected to the network (i.e., function storage unit 14 belongs to scanner 1, function storage unit 24 belongs to printer 2) [see Fig. 8].

Regarding claim 15, Noguchi further teaches the home network system as claimed in claim 12, further comprising a supporter module, wherein the supporter

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module is provided in a device, to which the supporter module does not belong, among the plurality of devices connected to the network (i.e., function storage unit 14 does not belong to printer 2 and function storage unit 24 does not belong to scanner 1) [see Fig. 8].

Claim 16 is rejected under the same rationale set forth above to claim 6.

Claim 17 is rejected under the same rationale set forth above to claim 7.

Regarding claim 18, Noguchi teaches a recordable storage medium, comprising:
a negotiator module for determining cooperative work service roles of devices connected to a network through a predetermined election algorithm so that a cooperative work service among the devices can be performed by using descriptions collected from the devices (i.e., interpretation unit for recognizing that new apparatus has been connected to the network of cooperative work service and interpreting the functional information of the new apparatus) [see Abstract and Col. 2, Lines 34-47 and Col. 3, Lines 25-56];

a supporter module for performing operations of the devices according to the cooperative work service roles determined by the negotiator module (i.e., function storage unit for storing the service definition information defining the service by the input/output relationship and service-related description relating to cooperative service that can be provided in cooperation with the other apparatus connected in the network) [see Col. 4, Lines 8-29 and Col. 9, Lines 38-50]; and

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a coordinator module for one of directly performing a control command transmitted from a control device and transmitting the control command to the supporter module to process the control command (i.e., interface unit for notifying the other network connection apparatus connected to the network of the information of its own apparatus stored in the information storing unit and controlling the input/output relationship regarding the cooperative service that can be realized in combination with the functions of a plurality of apparatus according to definition/service-related description) [see Col. 2, Lines 44-47 and Col. 11, Line 51 to Col. 12, Line 21].

Claim 19 is rejected under the same rationale set forth above to claim 6.

Claim 20 is rejected under the same rationale set forth above to claim 7.

Regarding claim 21, Noguchi teaches a cooperative work service method, comprising:

causing a cooperative work service to inform other cooperative work services connected to a network of a presence of said cooperative work service and to exchange service descriptions with cooperative work services having the same service functions, and determining a role of the cooperative work service by using the provided service descriptions and a predetermined election algorithm (i.e., recognizing that new apparatus has been connected to the network of cooperative work service and interpreting the functional information of the new apparatus) [see Abstract and Col. 2, Lines 34-47 and Col. 3, Lines 25-56]; and

selectively executing one of a coordinator module (i.e., notifying the other network connection apparatus connected to the network of the information of its own apparatus stored in the information storing unit and controlling the input/output relationship regarding the cooperative service that can be realized in combination with the functions of a plurality of apparatus according to definition/service-related description) [see Col. 2, Lines 44-47 and Col. 11, Line 51 to Col. 12, Line 21] and a supporter module according to the determined role (i.e., storing the service definition information defining the service by the input/output relationship and service-related description relating to cooperative service that can be provided in cooperation with the other apparatus connected in the network) [see Col. 4, Lines 8-29 and Col. 9, Lines 38-50].

Regarding claim 22, Noguchi further teaches the cooperative work service method as claimed in claim 21, further comprising causing the coordinator module to request the supporter module connected to the network for a service according to a control command sent by a control device and to receive a response from the supporter module, and causing the supporter module to inform the coordinator module connected to the network of an event message generated according to the control command and to receive a response from the coordinator module [see Fig. 8 and Abstract and Col. 13, Lines 14-53].

Claim 23 is rejected under the same rationale set forth above to claim 7.

Regarding claim 24, Noguchi further teaches the cooperative work service method as claimed in claim 23, wherein a process of coordinating the cooperative work service roles of the devices comprises determining, through a discovery-advertisement process for informing other devices present in the network of the presence of each device, whether other cooperative work services exist, and determining a cooperative work service role of each device as a coordinator if it is determined that there are no said other cooperative work services, and collecting the service descriptions from the same cooperative work services and determining whether the cooperative work service role of said each device was a coordinator if it is determined that there are said other cooperative work services, and then, establishing the cooperative work service role as the coordinator if the cooperative work service role was a coordinator, and establishing the cooperative work service role as a supporter if the cooperative work service role was not a coordinator [see Fig. 8 and Col. 2, Lines 34-47 and Col. 3, Lines 25-56 and Col. 4, Lines 8-29 and Col. 9, Lines 38-50 and Col. 13, Lines 14-53].

Regarding claim 25, Noguchi further teaches the cooperative work service method as claimed in claim 23, wherein the determined cooperative work service role is a coordinator for one of directly receiving and performing a control command transmitted from a control device present in the network, and transmitting a control command to other devices, to control the operations of the devices (i.e., notifying the other network connection apparatus connected to the network of the information of its

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own apparatus stored in the information storing unit and controlling the input/output relationship regarding the cooperative service that can be realized in combination with the functions of a plurality of apparatus according to definition/service-related description) [see Col. 2, Lines 44-47 and Col. 11, Line 51 to Col. 12, Line 21].

Regarding claim 26, Noguchi further teaches the cooperative work service method as claimed in claim 23, wherein the determined cooperative work service role is a supporter for one of processing a control command transmitted from a device which performs the coordinator role and resides on the network and providing services corresponding to the control command (i.e., storing the service definition information defining the service by the input/output relationship and service-related description relating to cooperative service that can be provided in cooperation with the other apparatus connected in the network) [see Col. 4, Lines 8-29 and Col. 9, Lines 38-50].

Regarding claim 27, Noguchi teaches a cooperative work service management apparatus, comprising: a negotiator module for determining whether a service providing unit, which performs a specific service within a device, to which the negotiator module belongs, according to a control command transmitted from a control device, should be activated, so that a cooperative work service among devices can be performed by using descriptions collected from the devices connected to a network (i.e., interpretation unit for recognizing that new apparatus has been connected to the network of cooperative work service and interpreting the functional information of the new apparatus and

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realizing scanning /printing service) [see Fig. 8 and Abstract and Col. 2, Lines 34-47 and Col. 3, Lines 25-56].

Regarding claim 28, Noguchi teaches a home network apparatus, comprising:

- a service providing unit connected to a network for providing a predetermined service (i.e., image capturing unit 15 for scanning service and image printing unit 25 for printing service) [see Fig. 8]; and
- a negotiator module for determining whether the service providing unit within a device to which the negotiator module belongs should be activated, so that a cooperative work service among devices, performing at least one same function where the at least one same function is required for the cooperative work service (i.e., input/output function or storing function) [see Fig. 8], can be performed through device descriptions collected from the devices connected to the network (i.e., interpretation unit for recognizing that new apparatus has been connected to the network of cooperative work service and interpreting the functional information of the new apparatus) [see Abstract and Col. 2, Lines 34-47 and Col. 3, Lines 25-56].

Regarding claim 29, Noguchi teaches a home network system, comprising:

- a plurality of devices connected to a network (i.e., scanner 1 and printer 2 are connected to a network 7) [see Fig. 8];

a service providing unit connected to each of the plurality of devices, for providing a predetermined service (i.e., image capturing unit 15 for scanning service and image printing unit 25 for printing service) [see Fig. 8]; and

a negotiator module for determining whether the service providing unit within a device to which the negotiator module belongs should be activated, so that a cooperative work service among the plurality of devices, performing at least one same function where the at least one same function is required for the cooperative work service (i.e., input/output function or storing function) [see Fig. 8], can be performed through device descriptions collected from the plurality of devices connected to the network (i.e., interpretation unit for recognizing that new apparatus has been connected to the network of cooperative work service and interpreting the functional information of the new apparatus) [see Abstract and Col. 2, Lines 34-47 and Col. 3, Lines 25-56].

Claim 30 is rejected under the same rationale set forth above to claim 21.

Regarding claim 31, Noguchi further teaches the cooperative work service management apparatus as claimed in claim 1, wherein the negotiator module allocates the cooperative work service to the devices that perform at least one same function required for the cooperative work service (i.e., input/output function or storing function) [see Fig. 8].

Regarding claim 32, Noguchi further teaches the cooperative work service management apparatus as claimed in claim 6, wherein the negotiator module sets the determined cooperative work service roles by activating one of the coordinator module or a support module which receives the control command transmitted from the coordinator module to provide a service corresponding to the control command and deactivating the other module [see Fig. 8 and Abstract and Col. 2, Lines 34-47 and Col. 3, Lines 25-56].

Regarding claim 33, Noguchi further teaches the home network system as claimed in claim 12, wherein the negotiator module is dedicated to determining cooperative work services roles and is in a separate apparatus from the plurality of devices [see Abstract and Fig. 8].

Regarding claim 34, Noguchi further teaches the recordable storage medium as claimed in claim 18, wherein if the supporter module is activated in a device, the coordinator module is deactivated in the device and vice versa [see Fig. 8 and Abstract and Col. 2, Lines 34-47 and Col. 3, Lines 25-56].

Regarding claim 35, Noguchi further teaches the cooperative work service method as claimed in claim 24, wherein if the coordinator is a device which performs same service as another device exists, the another device is a supporter which executes one of processing a control command transmitted from the coordinator device

and resides on the network providing services corresponding to the control command provided by the coordinator device [see Col. 4, Lines 8-29 and Col. 9, Lines 38-50].

Regarding claim 36, Noguchi further teaches the cooperative work service management apparatus as claimed in claim 1, wherein the negotiator module coordinates among the devices that provide same services using middleware service definitions for a home network [see Fig. 8].

Response to Arguments

4. Applicant's arguments have been fully considered but they are not persuasive because of the following reasons:

Based on the broadest reasonable interpretation, Noguchi still teaches a cooperative work service management apparatus comprising a negotiator module for determining cooperative work service roles of devices connected to a network, through a predetermined election algorithm, so that a cooperative work service can be performed among the devices by using descriptions collected from the devices, and controlling operations of the devices according to the determined cooperative work service roles to process a control command transmitted from a control device connected to the network. For example, Noguchi discloses interpretation unit for recognizing that new apparatus has been connected to the network of cooperative work service and interpreting the functional information of the new apparatus [see Abstract and Col. 2, Lines 34-47 and Col. 3, Lines 25-56].

In addition, Noguchi further teaches a cooperative work service management apparatus, comprising: a coordinator module for one of directly performing a control command transmitted from a control device present in a network having devices connected thereto and transmitting the control command to other devices so as to control operations of the other devices according to descriptions collected from the devices connected to the network and cooperative work service roles determined through a predetermined algorithm. For example, Noguchi further discloses interface unit for notifying the other network connection apparatus connected to the network of the information of its own apparatus stored in the information storing unit and controlling the input/output relationship regarding the cooperative service that can be realized in combination with the functions of a plurality of apparatus according to definition/service-related description [see Col. 2, Lines 44-47 and Col. 11, Line 51 to Col. 12, Line 21].

Moreover, Noguchi also teaches a cooperative work service management apparatus, comprising: a supporter module for receiving a control command of a control device, transmitted from a coordinator module present in a network to provide a service corresponding to the control command, according to descriptions collected from devices connected to the network and cooperative work service roles determined through a predetermined algorithm. For example, Noguchi discloses function storage unit for storing the service definition information defining the service by the input/output relationship and service-related description relating to cooperative service that can be provided in cooperation with the other apparatus connected in the network [see Col. 4, Lines 8-29 and Col. 9, Lines 38-50], wherein the devices perform at least one same

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function where the at least one same function is required for the service and wherein the predetermined algorithm allocates the service with the at least one same function amongst the devices to perform the at least one same function. That is, input/output function or storing function [see Fig. 8].

In view of the foregoing, the examiner asserts that the cited reference (Noguchi et al, U.S. Pat. No. 7,076,550) does teach or suggest the subject matter recited in independent and dependent claims based on the broadest reasonable interpretation as shown in the rejection portion. Accordingly, the examiner respectfully maintains the rejections for claims 1-36 as shown above.

Conclusion

5. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CAR 1.136(a).

A SHORTENED STATUTORY PERIOD FOR REPLY TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE MAILING DATE OF THIS ACTION. IN THE EVENT A FIRST REPLY IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 CAR 1.136(A) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT, HOWEVER, WILL THE STATUTORY PERIOD FOR REPLY EXPIRE LATER THAN SIX MONTHS FROM THE MAILING DATE OF THIS FINAL ACTION.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip Tran whose telephone number is (571) 272-3991. The Group fax phone number is (571) 273-8300. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar, can be reached on (571) 272-4006.

7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Philip B Tran/
Primary Examiner, Art Unit 2455
March 14, 2010